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# Inhalants

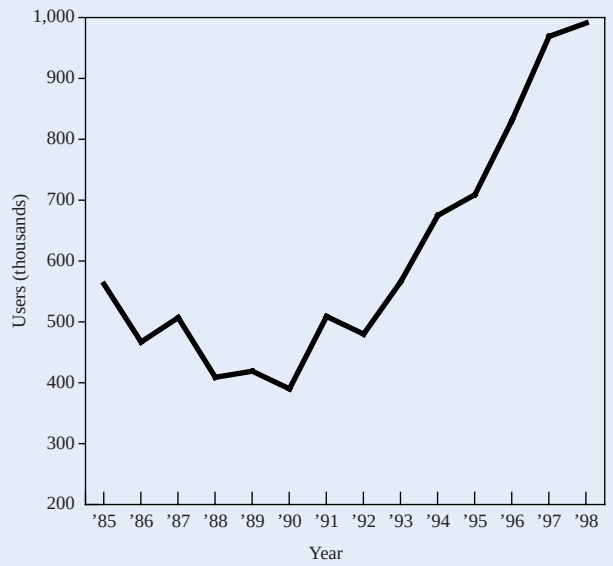
## Background Information

The term "inhalants" refers to more than a thousand different household and commercial products that can be intentionally abused by sniffing or "huffing" (inhaling through one's mouth) for an intoxicating effect. These products are composed of volatile solvents and substances commonly found in commercial adhesives, lighter fluids, cleaning solutions, and paint products. Their easy accessibility, low cost, and ease of concealment make inhalants, for many, one of the first substances abused.

Typical first use occurs between late childhood and early adolescence. According to the National Household Survey on Drug Abuse (NHSDA), there were an estimated 991,000 new inhalant users in 1998, up from 509,000 in 1991 (see figure 1). The *2000 Monitoring the Future Study* from the University of Michigan reported that 9.4% of 8th graders used inhalants in the past year (see table 1).

According to the *1999 Youth Risk Behavior Surveillance Survey*, 14.6% of high school students nationwide have sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high at least once during their lifetime. Of these high school students, 4.2% had used inhalants in the 30 days preceding the survey. The *2000 Monitoring the Future Study* shows that 4.5% of 8th graders, 2.6% of 10th graders, and 2.2% of 12th graders used inhalants in the past month (see table 2).

**Figure 1. Number of new inhalant users per year**




Source: National Household Survey on Drug Abuse.

**Table 1. Percentage of students reporting past-year inhalant use, 1994–2000**

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|
| 8th graders | 11.7 | 12.8 | 12.2 | 11.8 | 11.1 | 10.3 | 9.4 |
| 10th graders | 9.1 | 9.6 | 9.5 | 8.7 | 8.0 | 7.2 | 7.3 |
| 12th graders | 7.7 | 8.0 | 7.6 | 6.7 | 6.2 | 5.6 | 5.9 |

Source: Monitoring the Future Study

**Table 2. Percentage of students reporting past-month inhalant use, 1994–2000**

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|
| 8th graders | 5.6 | 6.1 | 5.8 | 5.6 | 4.8 | 5.0 | 4.5 |
| 10th graders | 3.6 | 3.5 | 3.3 | 3.0 | 2.9 | 2.6 | 2.6 |
| 12th graders | 2.7 | 3.2 | 2.5 | 2.5 | 2.3 | 2.0 | 2.2 |

Source: Monitoring the Future Study

## Inhalant Legislation, 2000

Much experimentation with inhalants, such as correction fluids and cleaning solvents, occurs with household and commercial products found in almost every

home and office. Although not regulated under the Controlled Substances Act (CSA), many State legislatures have attempted to deter youth who buy legal products to get high by placing restrictions on the sale of these products to minors. As reported by the National Conference of State Legislatures, 38 States have adopted laws preventing the sale, use, and/or distribution to minors of various products commonly abused as inhalants. Some States have introduced fines, incarceration, or mandatory treatment for the sale, distribution, use, and/or possession of inhalable chemicals.

### States With Current Inhalant Legislation

| | |
|---|---|
| Arizona | Nevada |
| California | New Hampshire |
| Colorado | New Jersey |
| Connecticut | New Mexico |
| Florida | North Carolina |
| Georgia | North Dakota |
| Hawaii | Ohio |
| Idaho | Oklahoma |
| Illinois | Oregon |
| Iowa | Pennsylvania |
| Kentucky | Rhode Island |
| Louisiana | South Carolina |
| Maine | South Dakota |
| Maryland | Tennessee |
| Massachusetts | Texas |
| Michigan | Utah |
| Minnesota | Vermont |
| Mississippi | Virginia |
| Nebraska | Wisconsin |

Source: National Conference of State Legislatures.

## Routes of Administration

Modes of administration entail sniffing or huffing directly from the containers for products such as rubber cement or correction fluid, sniffing fumes from plastic bags over the head, or sniffing cloth saturated with the substance. The substance may also be inhaled directly from an aerosol can or out of alternative containers such as a balloon filled with nitrous oxide. Some volatile substances may release intoxicating vapors when heated.

## Effects

The effects of inhalant use resemble alcohol inebriation. On inhalation, the body becomes starved of oxygen, forcing the heart to beat more rapidly in an attempt to increase the flow of blood to the brain. The user initially experiences stimulation, loss of inhibition, and distorted perception of reality and spatial relations. Following this short period of time (usually only a few minutes, which users may refer to as a "head rush"), the senses become depressed and a sense of lethargy may arise as the body attempts to restabilize the flow of blood to the brain. Users can become intoxicated several times over a few hours because of the chemical's short-acting, rapid-onset effect. Many users experience headaches, nausea or vomiting, slurred speech, loss of motor coordination, and wheezing.

### Commonly Abused Commercial Products

**Adhesives**
Model airplane glue, rubber cement, household glue.

**Aerosols**
Spray paint, hair spray, air freshener, deodorant, fabric protector.

**Anesthetics**
Nitrous oxide, ether, chloroform.

**Cleaning agents**
Dry cleaning fluid, spot remover, degreaser.

**Food products**
Vegetable cooking spray, dessert topping spray (whipped cream), "whippets" (nitrous oxide).

**Gases**
Nitrous oxide, butane, propane, helium.

**Solvents and gases**
Nail polish remover, paint thinner, paint remover, typing correction fluid and thinner, toxic markers, pure toluene, toluol, cigar lighter fluid, gasoline, carburetor cleaner, octane booster.

Source: National Inhalant Prevention Coalition.

Heavy or sustained inhalant use causes tolerance to the inhalant, and physical withdrawal symptoms may develop within several hours to a few days after discontinuation. Withdrawal symptoms include sweating, rapid pulse, hand tremors, insomnia, nausea, vomiting, physical agitation, anxiety, hallucinations, and grand mal seizures. Indicators of inhalant abuse may include

## Damage to Body Caused by Inhalants

**Acoustic nerve and muscle**
Destruction of cells that relay sound to the brain may cause deafness.

**Blood**
The oxygen-carrying capacity of the blood can be inhibited.

**Bone marrow**
Components containing benzene have been shown to cause leukemia.

**Brain**
Damage is also caused to the cerebral cortex and the cerebellum, resulting in personality changes, memory impairment, hallucinations, loss of coordination, and slurred speech.

**Heart**
Sudden sniffing death (SSD) syndrome,* an unexpected disturbance in the heart's rhythm, may cause fatal cardiac arrhythmias (heart failure).

**Kidneys**
The kidney's ability to control the amount of acid in the blood may be impaired. Kidney stones may develop after use is terminated.

**Liver**
Gathering of fatty tissue may cause liver damage.

**Lungs**
Damaged lungs and impaired breathing occurs with repeated use.

**Muscle**
Chronic use can lead to muscle wasting and reduced muscle tone and strength.

**Peripheral nervous system**
Damage to the nerves may result in numbness, tingling, and paralysis.

**Skin**
A severe rash around the nose and mouth, referred to as "glue sniffer's rash," may result.

*SSD syndrome may result when a user deeply inhales a chemical for the effect of intoxication. This causes a decrease in available oxygen in the body. If the user becomes startled or engages in sudden physical activity, an increased flow of adrenalin from the brain to the heart induces cardiac arrest and death occurs within minutes.

Source: National Inhalant Prevention Coalition.

## Street Terms for Inhalants and Their Use

Air blast
Ames (amyl nitrate)
Amies (amyl nitrate)
Amys (amyl nitrate)
Aroma of men (isobutyl nitrate)
Bagging (using inhalants)
Bang
Bolt (isobutyl nitrate)
Boppers (amyl nitrate)
Bullet (isobutyl nitrate)
Bullet bolt
Buzz bomb (nitrous oxide)
Climax (isobutyl nitrate)
Discorama
Glading (using inhalant)
Gluey (one who sniffs or inhales glue)
Hardware (isobutyl nitrate)
Head cleaner
Heart-on
High ball
Hippie crack
Honey oil
Huff
Huffer (inhalant abuser)
Huffing (sniffing an inhalant)
Kick
Laughing gas (nitrous oxide)
Locker room (isobutyl nitrate)
Medusa
Moon gas
Oz
Pearls (amyl nitrate)
Poor man's pot
Poppers (isobutyl nitrate, amyl nitrate)
Quicksilver (isobutyl nitrate)
Rush (isobutyl nitrate)
Rush snappers (isobutyl nitrate)
Satan's secret
Shoot the breeze (nitrous oxide)
Snappers (isobutyl nitrate)
Sniff
Snorting (using inhalant)
Snotballs (rubber cement rolled into balls, burned, and the fumes inhaled)
Thrust (isobutyl nitrate)
Toilet water
Toncho (octane booster)
Whippets (nitrous oxide)
Whiteout

Source: Drug Policy Information Clearinghouse.

paint or stains on the body or clothing; spots or sores around the mouth; red or runny eyes and nose; chemical odor on the breath; a drunk, dazed, or dizzy appearance; loss of appetite; excitability; or irritability.

There is a common link between inhalant abuse and problems in school such as failing grades, memory loss, learning problems, chronic absences, and general apathy. Inhalant users also tend to be disruptive, deviant, or delinquent as a result of the early onset of

use, the user's lack of physical and emotional maturation, and the physical consequences that occur from extended use.

## Sources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